

WHAT IS CLAIMED IS:

1. A multiple layer interlayer useful for blocking the transmission of
5 infra red (IR) light, comprising: (1) at least two thermoplastic polymer
sheets; and (2) a film, positioned between the thermoplastic polymer
sheets such that the film is in direct contact on each of its surfaces with
the sheets, wherein the film can either reflect or absorb IR light, and
wherein the thermoplastic polymer sheets are unplasticized.
10
2. A multiple layer interlayer useful for blocking the transmission of
infra red (IR) light, comprising: (1) at least two thermoplastic polymer
sheets; and (2) a film, positioned between the thermoplastic polymer
sheets such that the film is in direct contact on each of its surfaces with
15 the sheets, wherein the film can either reflect or absorb IR light, and
wherein the thermoplastic polymer sheets comprise unplasticized
ethylene/unsaturated acid copolymer ionomer.
3. A glass laminate useful for blocking the transmission of IR light,
20 comprising a multiple layer interlayer comprising: (1) at least two
thermoplastic polymer sheets; and (2) a film, positioned between the
thermoplastic polymer sheets such that the film is in direct contact on
each of its surfaces with the sheets, wherein the film can either reflect or
absorb IR light, and wherein the thermoplastic polymer sheets do not
25 include plasticizer.
4. A glass laminate useful for blocking the transmission of IR light,
comprising a multiple layer interlayer comprising: (1) at least two
thermoplastic polymer sheets; and (2) a film, positioned between the
30 thermoplastic polymer sheets such that the film is in direct contact on
each of its surfaces with the sheets, wherein the film can either reflect or
absorb IR light, and wherein the thermoplastic polymer sheets comprise
an unplasticized copolymer of ethylene and an unsaturated acid wherein
the acid groups of the copolymer have been at least partially neutralized
35 to yield an ethylene/unsaturated copolymer ionomer.

5. A process for manufacturing a multiple layer laminate article of the present invention comprising the steps: (1) priming at least one of the multiple layers of the laminate by application of a primer solution before assembling the layers; (2) assembling at least three layers to be used as component layers for the laminate article, wherein at least one layer is an IR-blocking film, and wherein at least two of the layers are unplasticized thermoplastic polymer sheets; (3) positioning the IR-blocking film such that it is contacted on its major surfaces by the unplasticized polymer sheets; and, (4) laminating the at least three layers by heating the assembled layers at a temperature of at least 120°C and at a pressure greater than atmospheric pressure.
6. The process of Claim 5 wherein the priming solution comprises a silane compound.
7. The process of Claim 6 wherein the silane compound is an aminosilane such as gamma-aminopropyltriethoxysilane or N-(2-aminoethyl)-3-aminopropyltrimethoxysilane or similar hydrolyzable amino silanes.